WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Wednesday, May 11, 2005

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,EPAB,JPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ		
☐	L1	ration	35034
☐	L2	dental restoration.clm.	505
☐	L3	bubbles with beads	1645
☐	L4	bubbles with colored beads	3
☐	L5	bubbles with color with beads	37
☐	L6	L5 and container	7
☐	L7	cotainer same bubble same bead	0
☐	L8	container same bubble same bead	106
☐	L9	L8 and 264/$.ccls.	8
☐	L10	colored beads with container	13
☐	L11	264/41-55.ccls. and container.clm.	271
☐	L12	L11 and colored beads.clm.	1
☐	L13	264/41-55.ccls. and beads.clm.	300
☐	L14	L13 and bubble.clm.	7
☐	L15	264/41-55.ccls. and (beads or sphere or microsphere or balloon or microballoon).clm. and bubble.clm.	18
☐	L16	L15 and color$4	8

END OF SEARCH HISTORY

L16: Entry 8 of 8 File: USPT Dec 14, 1993

DOCUMENT-IDENTIFIER: US 5269977 A
TITLE: Method of manufacturing a foam transparent organic glass plate

Brief Summary Text (4):
Because of the excellent transparency, surface luster, coloring, weather resistance and the like, a transparent resin plate of polymethyl methacrylate, methyl methacrylate, styrene copolymer, polystyrene or the like is used as an ornamental body, such as a signboard, a display and the like, or a roofing member when transparent, or also widely used as a signboard, a billboard, a lightening shade, etc. because of a scattered light permeability when milky in color due to white pigment added to the resin. Especially, a polymethyl methacrylate plate for the former use is significantly excellent in the above-mentioned characteristics and is used most in general.

Detailed Description Text (11):
Since the body according to the present invention functions in accordance with the principle of edge lighting, a light source may be preferably a fluorescent lamp, namely, a hot-cathode fluorescent discharge lamp (ordinary fluorescent lamp), or a cold cathode fluorescent discharge lamp; the latter, or the cold cathode type, is especially suitable from an aspect of the objective of the present invention. This is because the cold cathode type lamp can be made smaller in diameter 6 m/m.phi. or under, and additionally, it has not filament in it, so that the temperature of the light source never rise. It should be noted, however, that D.C. high supply voltage similar to a neon tubing must be prepared because the lamp cannot be turned on by ordinary 100 V A.C. Furthermore, an extension equipments like a parabolic reflective mirror, a capacitor, etc. should be provided, as required, to regulate the rays emitted by the light source as parallel to one another as possible. Spot light sources of high color temperature, such as xenon lamps or krypton lamps, might have an effect almost the same as a linear light source, if disposed parallel to one another. Thus, the term "linear light source" substantially means an alignment.

Detailed Description Text (81):
A product (ornamental plate) 1' of this embodiment is integrally formed of a square plate of colorless and transparent PMMA and a foam layer 3 of an open heart in shape in one surface of the PMMA plate.

Current US Cross Reference Classification (2):
264/41

Current US Cross Reference Classification (3):
264/45.3

Current US Cross Reference Classification (4):
264/50

CLAIMS:

1. A method of manufacturing a foam transparent organic glass plate which contains masses of many small evenly dispersed bubbles comprising the following steps;

mixing a fluid organic glass material selected from the group consisting of an

organic glass monomer, a prepolymer thereof, and a mixture of said organic glass monomer and said prepolymer with organic glass beads formed of said monomer in which said glass beads contain a small amount of air within the beads with air attached to or absorbed by minute cracks and voids in their surface,

permitting the mixture obtained in the above step to change to a gelled mixture which contains masses of many small bubbles dispersed, maintaining an even density of organic glass beads in the mixture along a length of said glass plate, and

polymerizing and hardening the gelled mixture by subjecting the organic glass material therein to heat.

2. A method according to claim 1, wherein the evenly dispersed density of organic glass beads in the mixture is obtained by stirring.

3. A method according to claim 2, wherein a ratio of fluid organic glass material to organic glass beads is from about 70:30 through about 20:80.

4. A method according to claim 1, wherein the evenly dispersed density of organic glass beads in the mixture is obtained by filling any gaps between the organic glass beads with the fluid organic glass material which is tightly bound in a cell.

5. A method according to claim 4, wherein a ratio of fluid organic glass material to organic glass beads is from about 70:30 through about 20:80.

6. A method according to claim 1, wherein a ratio of fluid organic glass material to organic glass beads is from about 70:30 through about 20:80.

7. A method of manufacturing a light reflective transparent body which contains at least one part comprising a foam transparent organic glass having masses of many small evenly dispersed bubbles therein comprising the following steps;

mixing a fluid organic glass material selected from the group consisting of an organic glass monomer, a prepolymer thereof and a mixture of said monomer and said prepolymer with organic glass beads formed of said monomer, said glass beads contain a small amount of air within the beads with air attached to or absorbed by minute cracks and voids in their surface, permitting the mixture obtained in the above step to change to a gelled mixture which contains masses of many small dispersed bubbles while maintaining an even density of organic glass beads in the mixture and

polymerizing and hardening integrally the gelled mixture obtained in the second step with a fluid organic glass material in a cast by subjecting the organic glass material to heat.

8. A method according to claim 7, wherein the density of the organic glass beads in the mixture is kept even by stirring in the second step.

9. A method according to claim 8, wherein a ratio of fluid organic glass material to organic glass beads in the first step is from about 70:30 through about 20:80.

10. A method according to claim 7, wherein the density of organic glass beads in the mixture is kept even by filling fluid organic glass material into gaps between the organic glass beads formed together tightly in a cell.

11. A method according to claim 10, wherein a ratio of fluid organic glass material to organic glass beads in the first step is from about 70:30 through about 20:80.

12. A method according to claim 7, wherein a ratio of fluid organic glass material to organic glass beads in the first step is from about 70:30 through about 20:80.

Previous Doc Next Doc Go to Doc#